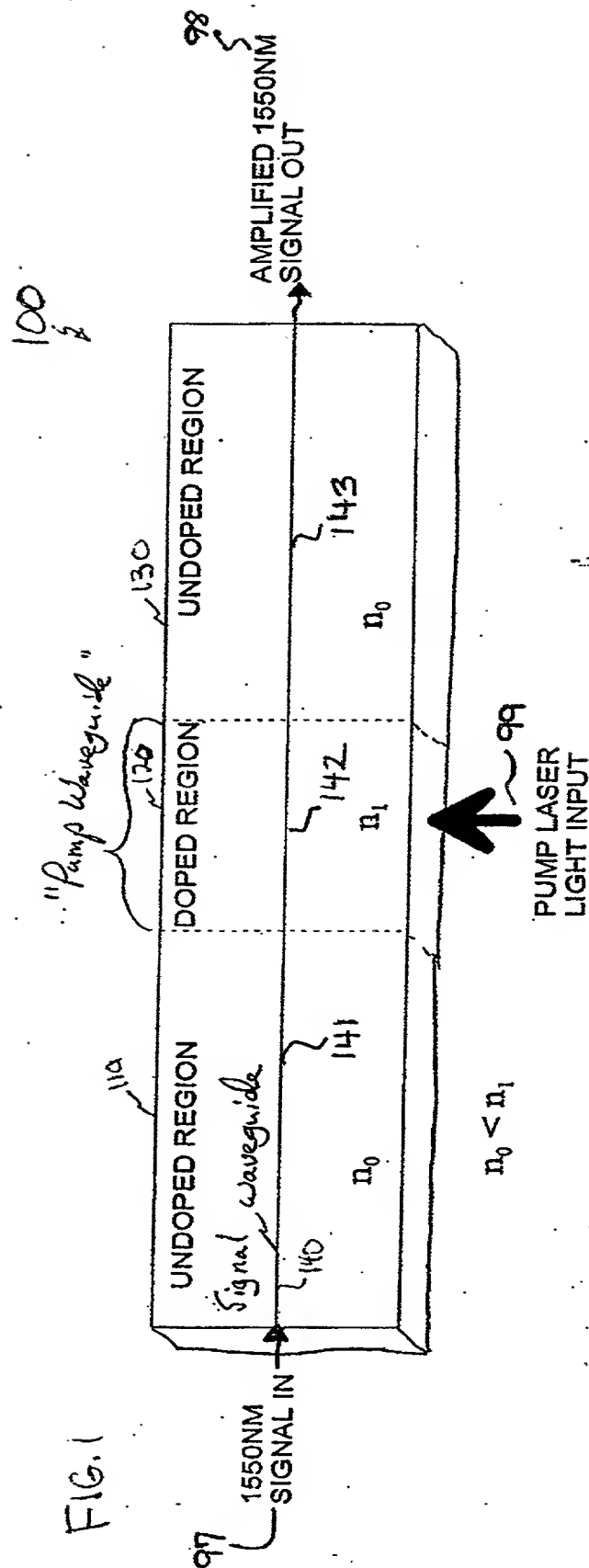
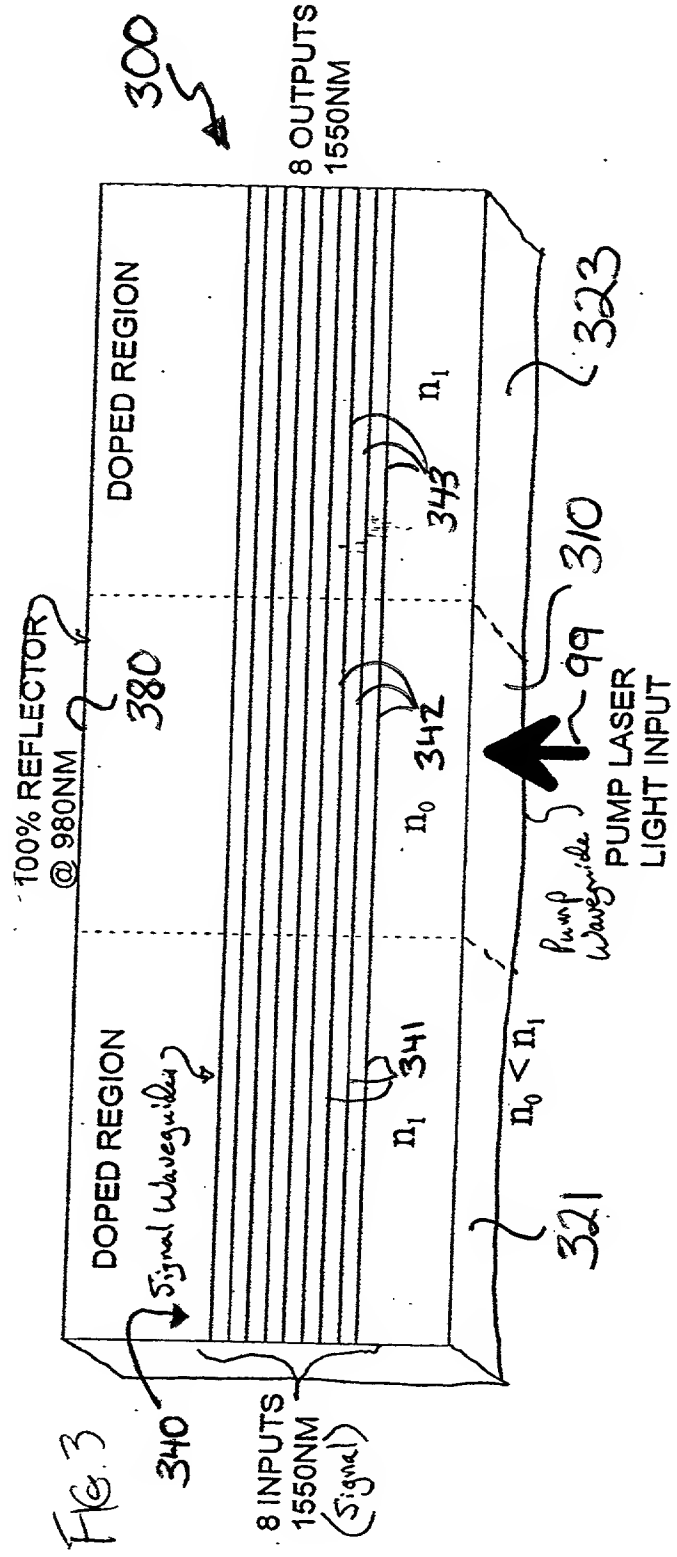
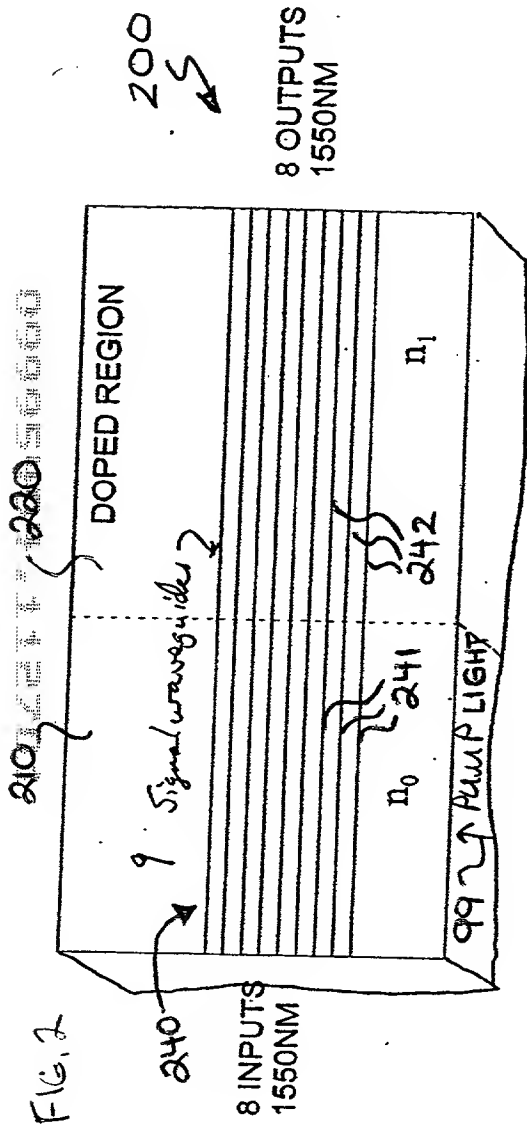


FIG. 1





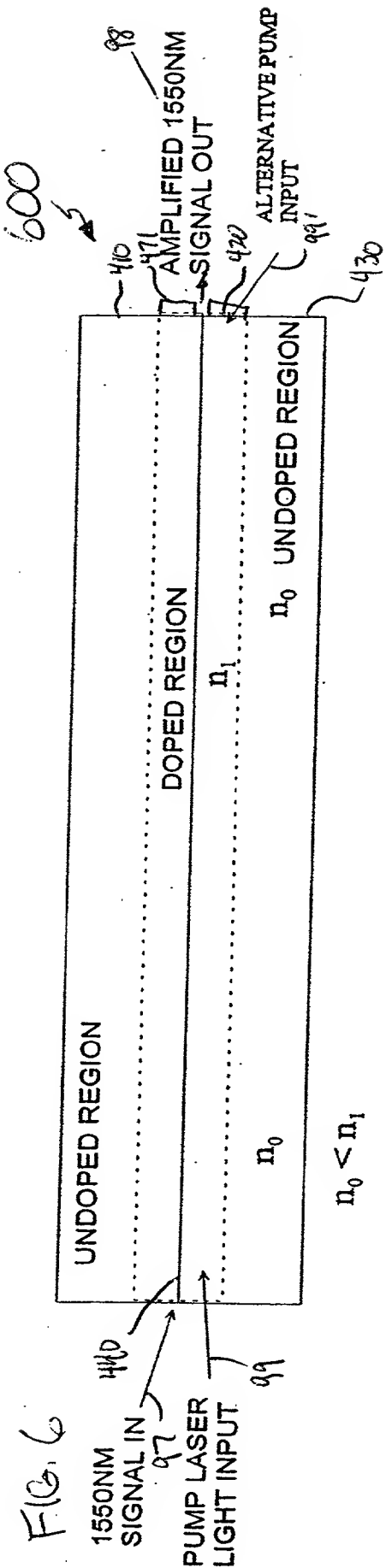
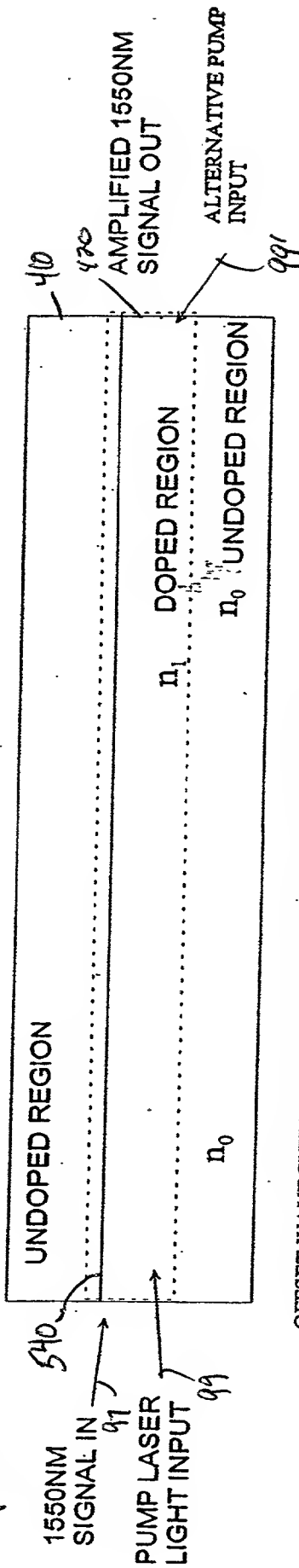


FIG. 7



OFFSET WAVEGUIDE TO MAXIMIZE AREA FOR PUMP LAUNCH.

FIG. 8

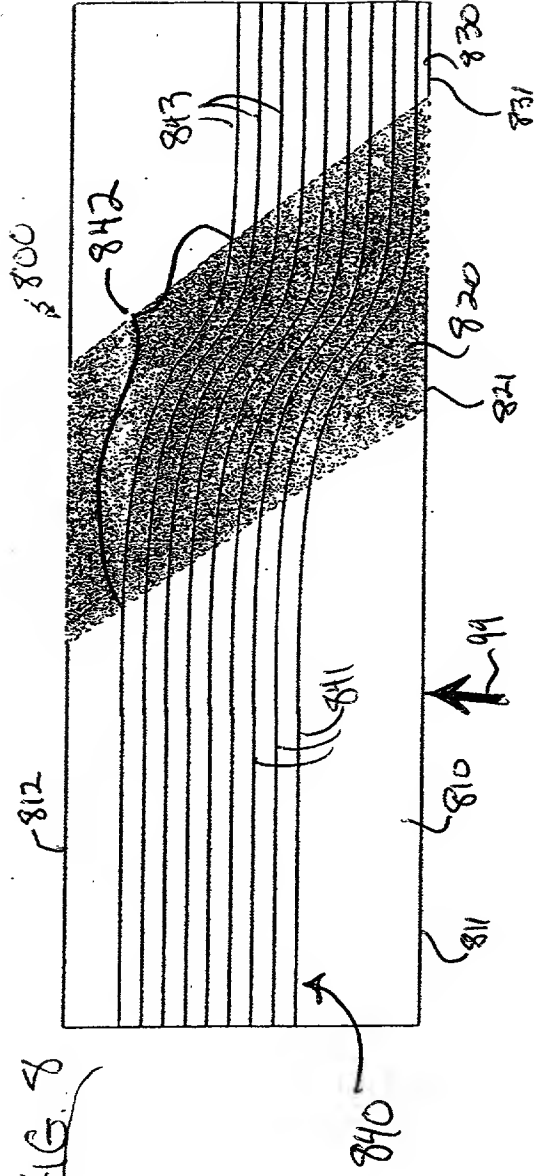
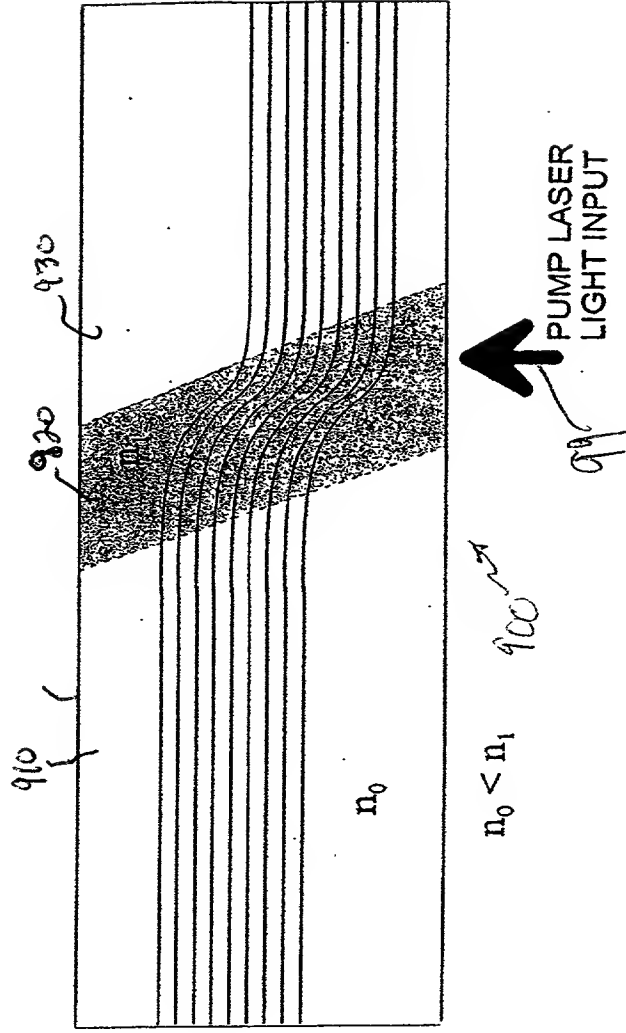


FIG. 9

PLURISUBSTRATE INPUTS
1550NM



$$n_0 < n_1$$

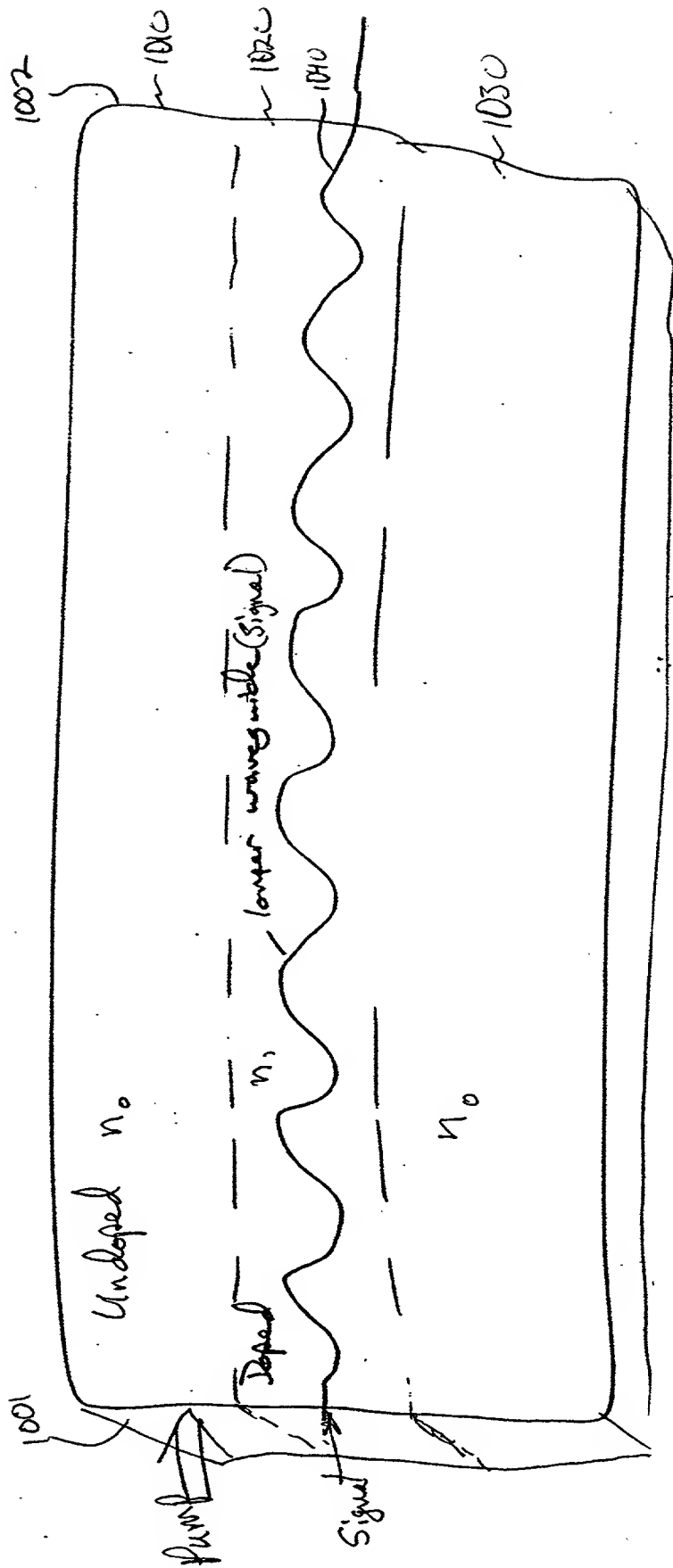


FIG. 10

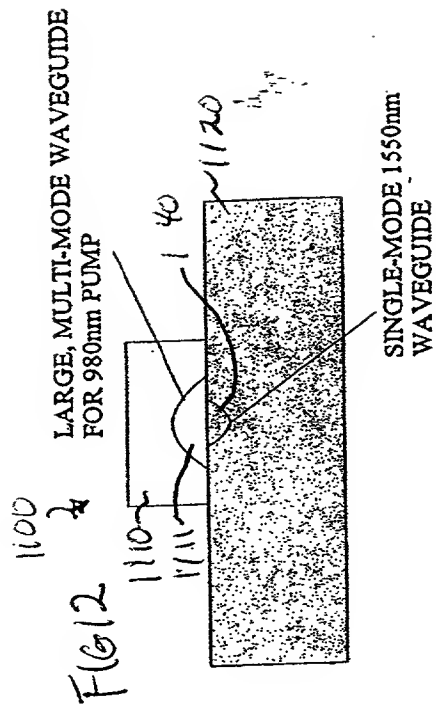
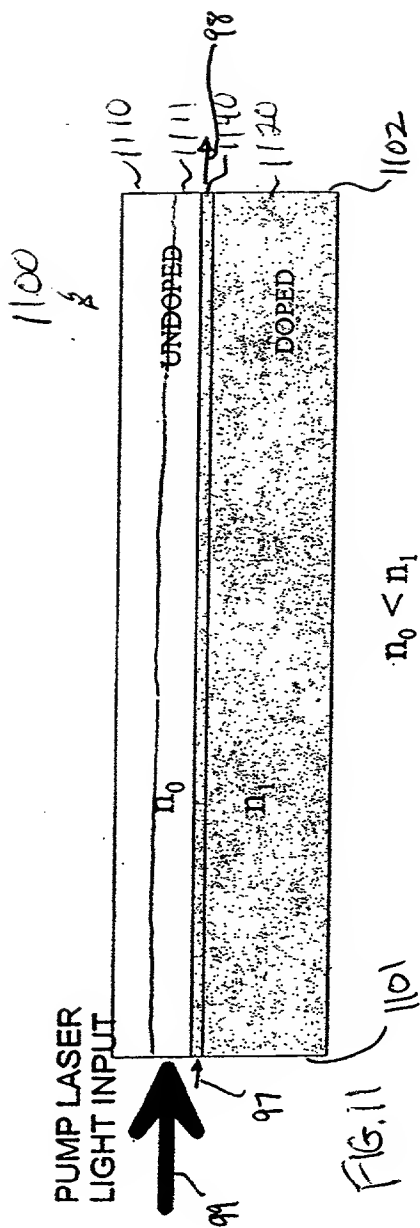


FIG. 13

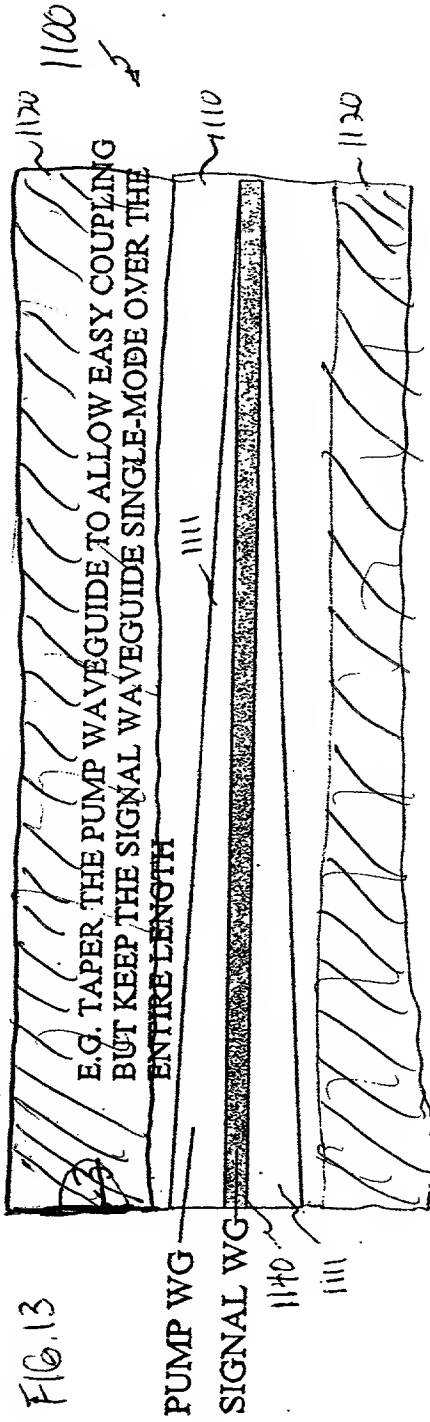
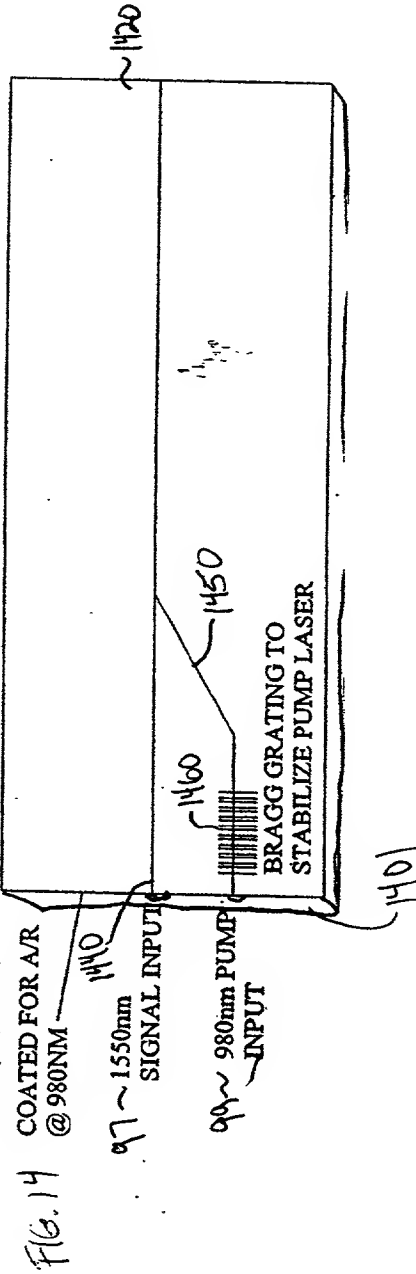
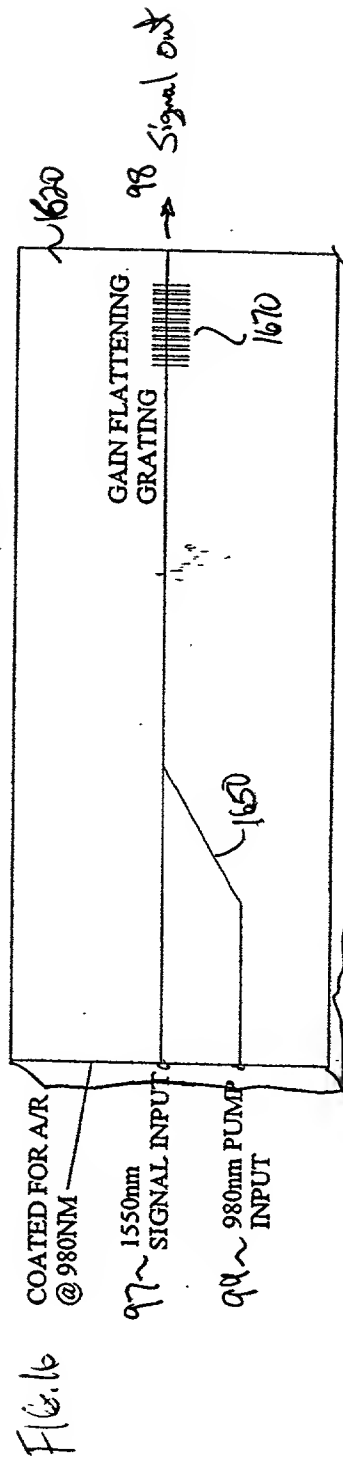
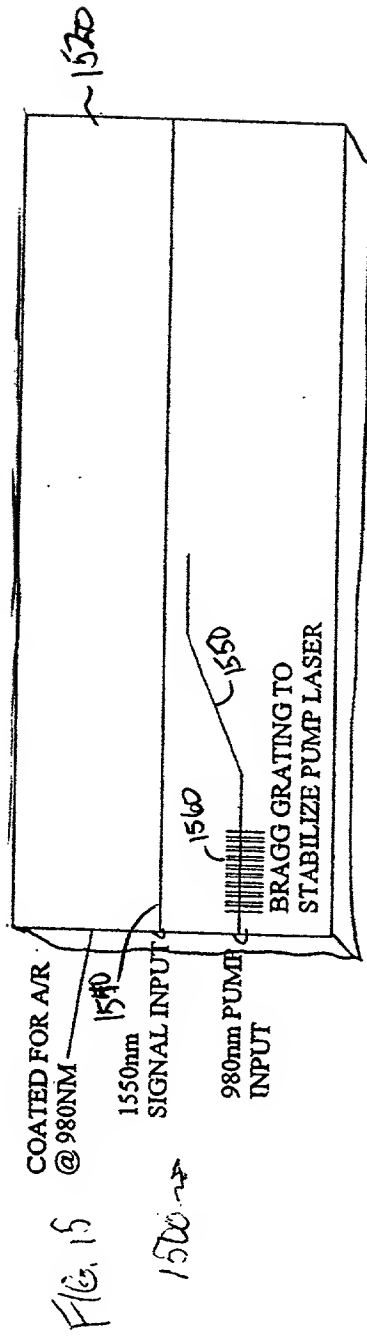


FIG. 14





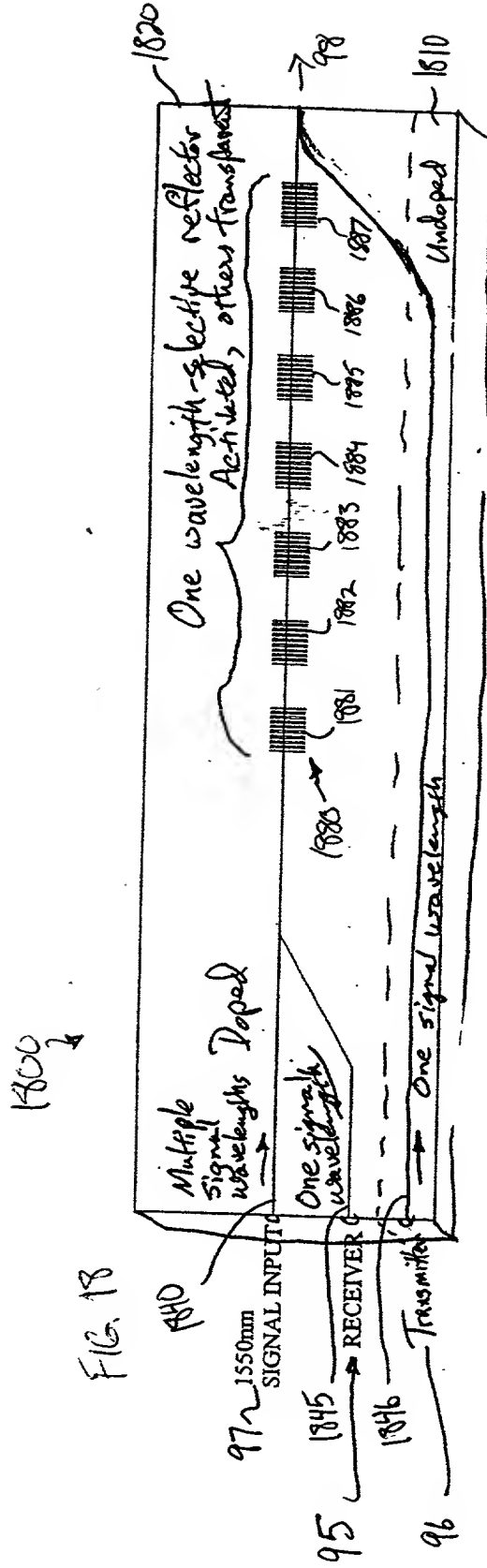
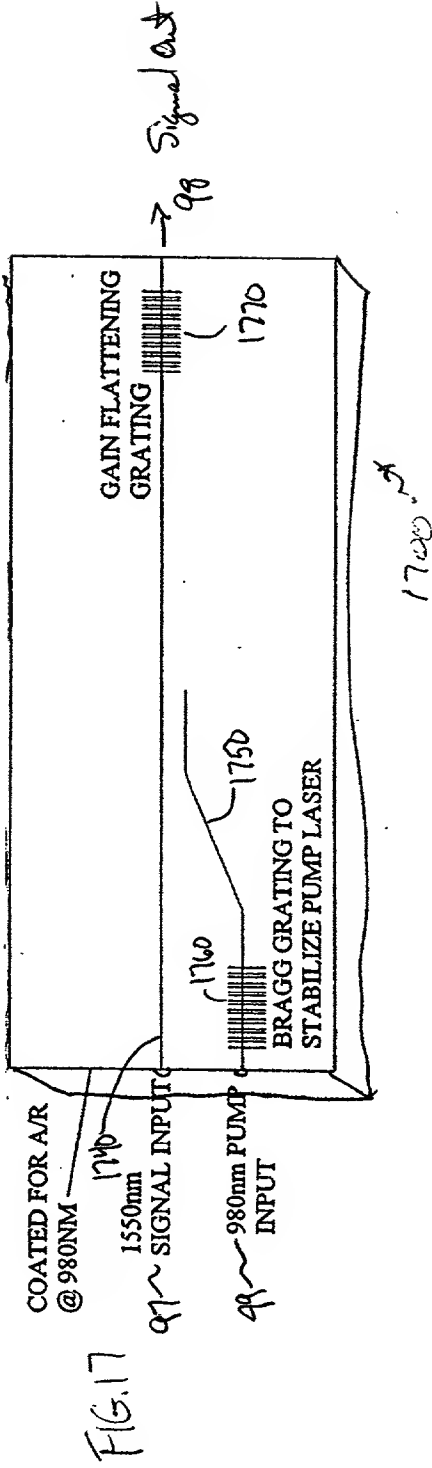
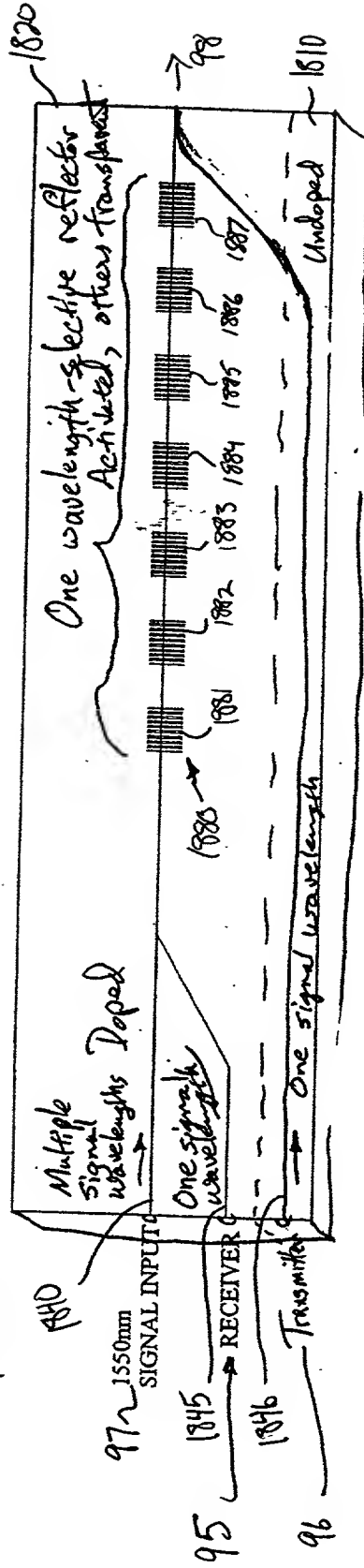
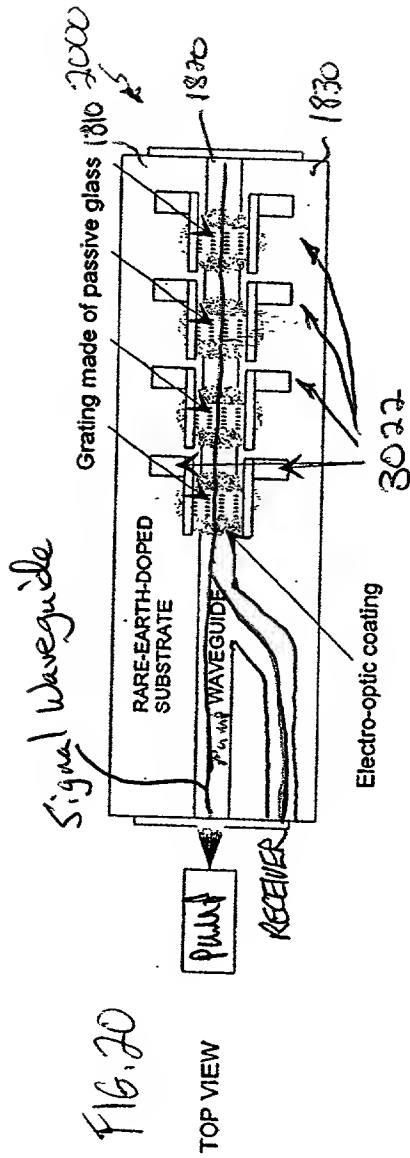
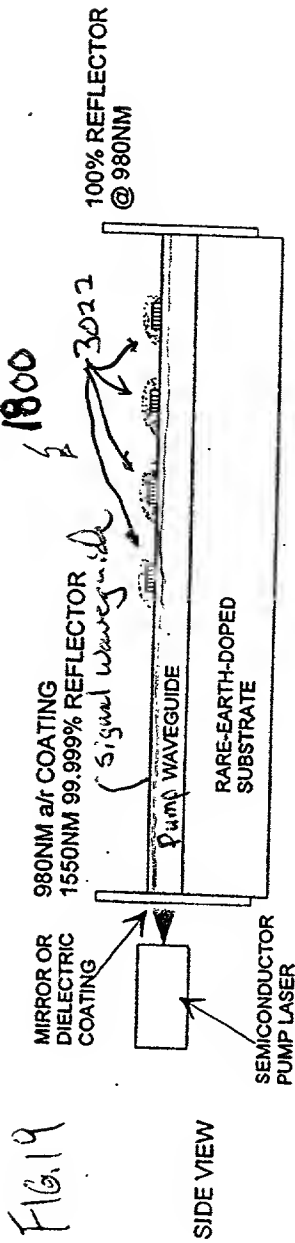
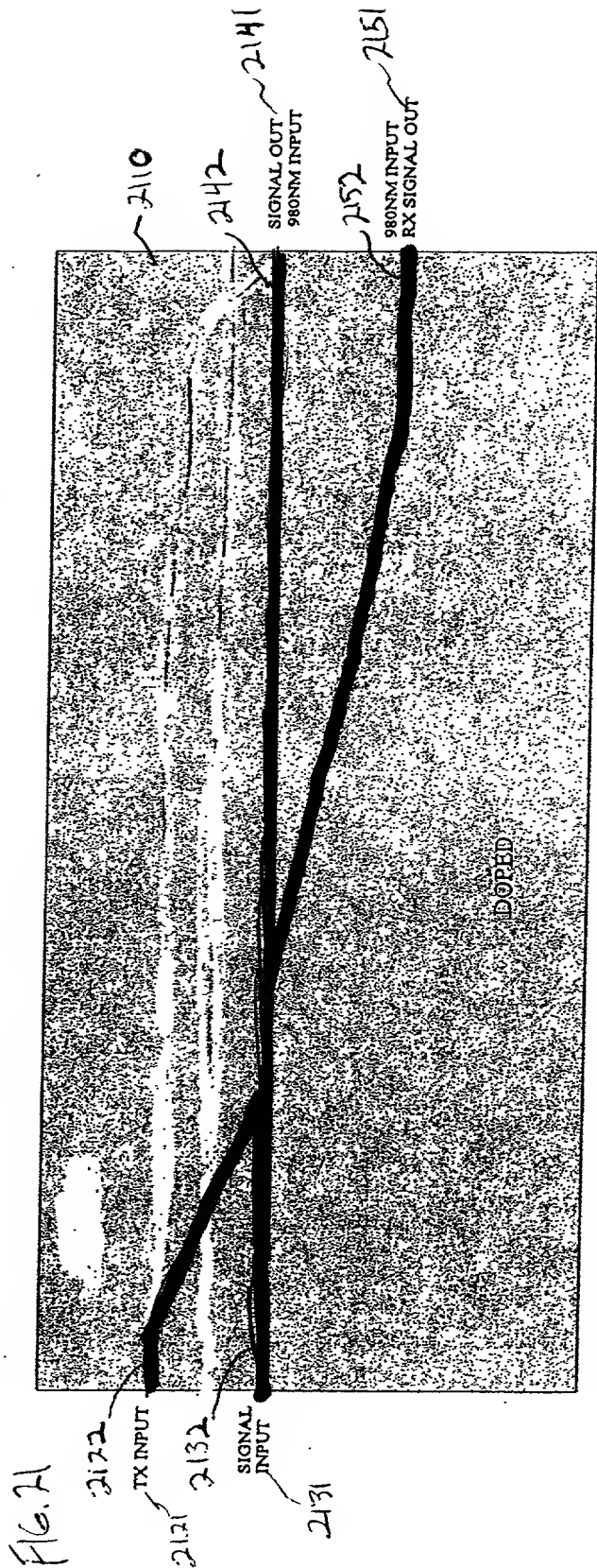


FIG. 18





ADD/DROP NODE WITH AMPLIFICATION



USES BOTH THE ATTENUATION AND AMPLIFICATION CHARACTERISTICS OF RARE-EARTH-DOPED GLASS TO ROUTE THE SIGNAL.

FIG. 22

Fig. 23

AMPLIFIED BYPASS MODE (OLD
SIGNAL PASSED STRAIGHT THROUGH)

RECEIVE MODE (OLD SIGNAL OUT,
NEW SIGNAL IN)

**BOTH THE OUTPUT AND
RX OUT COULD HAVE
WDM'S OR SPLITTERS TO
COMBINE THE 980 AND
1550 SIGNALS.**

COMBINE THE 980 AND 1550 SIGNALS. W-2 2400

File 24

五

ADD/DROP NODE WITH AMPLIFICATION

2600

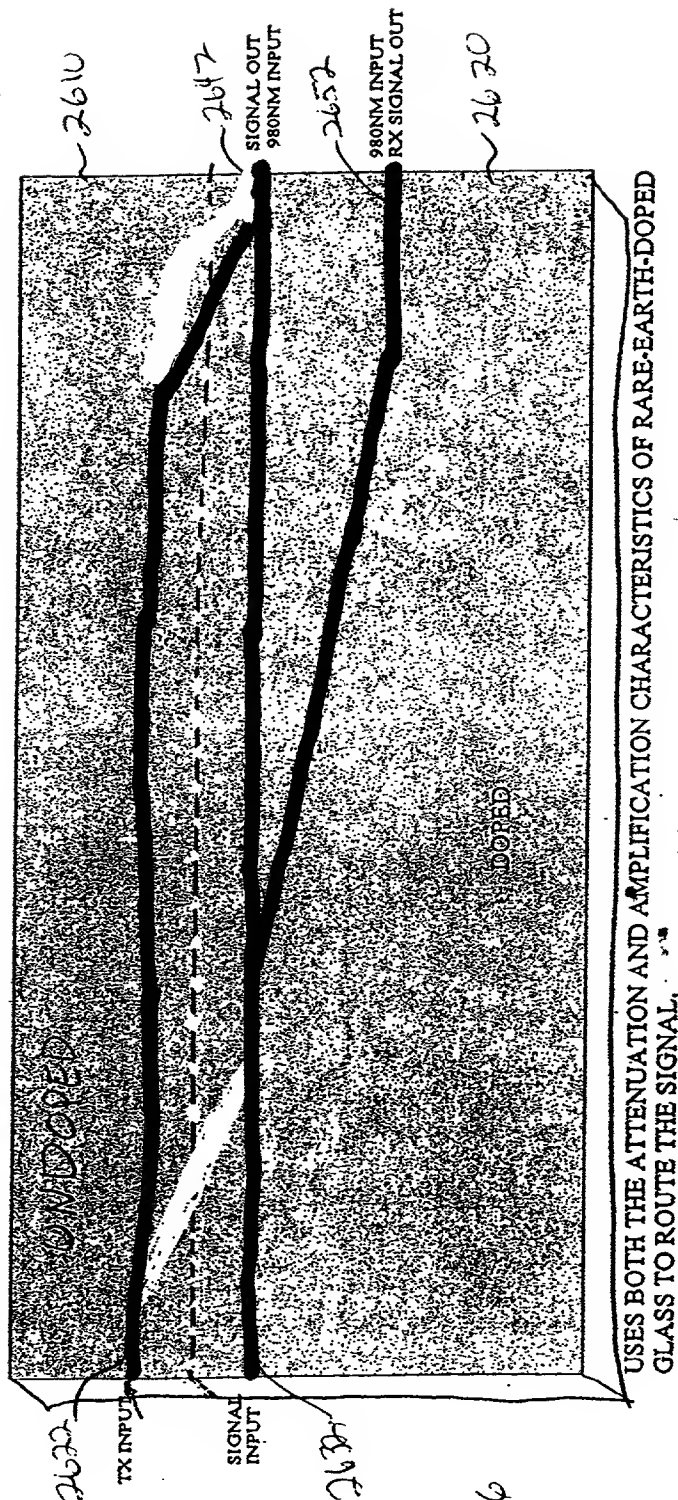
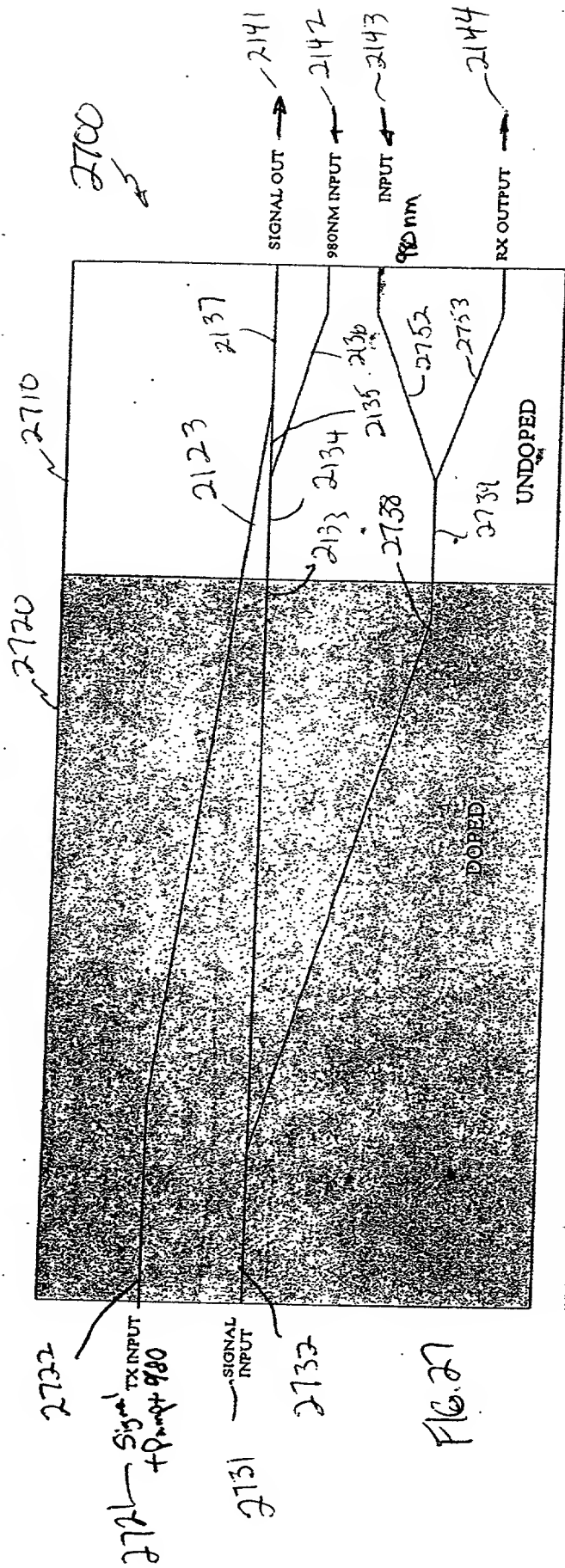


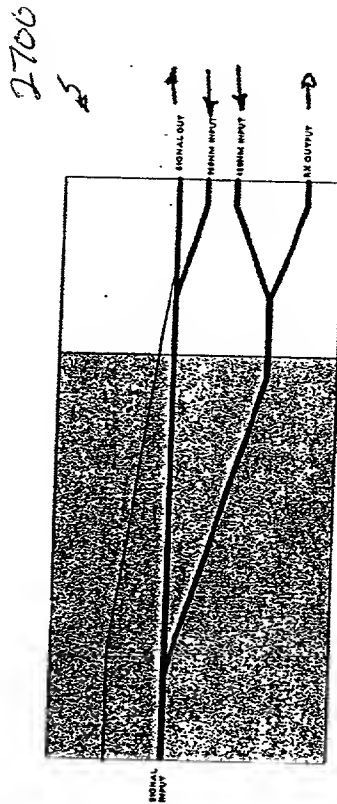
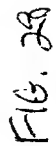
FIG. 26

USES BOTH THE ATTENUATION AND AMPLIFICATION CHARACTERISTICS OF RARE-EARTH-DOPED GLASS TO ROUTE THE SIGNAL.

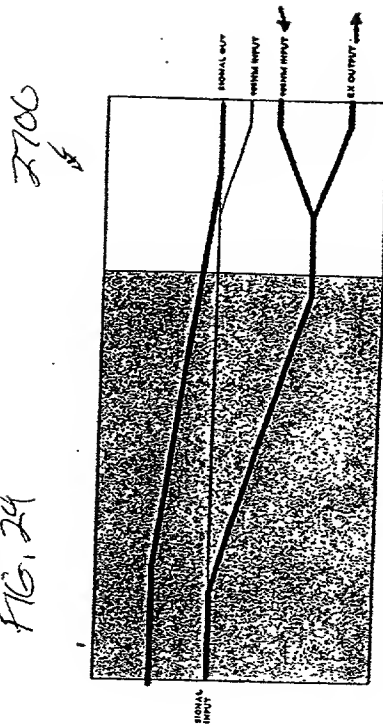
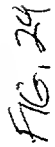
ADD/DROP NODE WITH AMPLIFICATION



USES BOTH THE ATTENUATION AND AMPLIFICATION CHARACTERISTICS OF RARE-EARTH-DOPED GLASS TO ROUTE THE SIGNAL.



AMPLIFIED PASS-THROUGH CONFIGURATION



ATTENUATED PASSTHROUGH AND NEW SIGNAL INJECTED

